GrummanWorld

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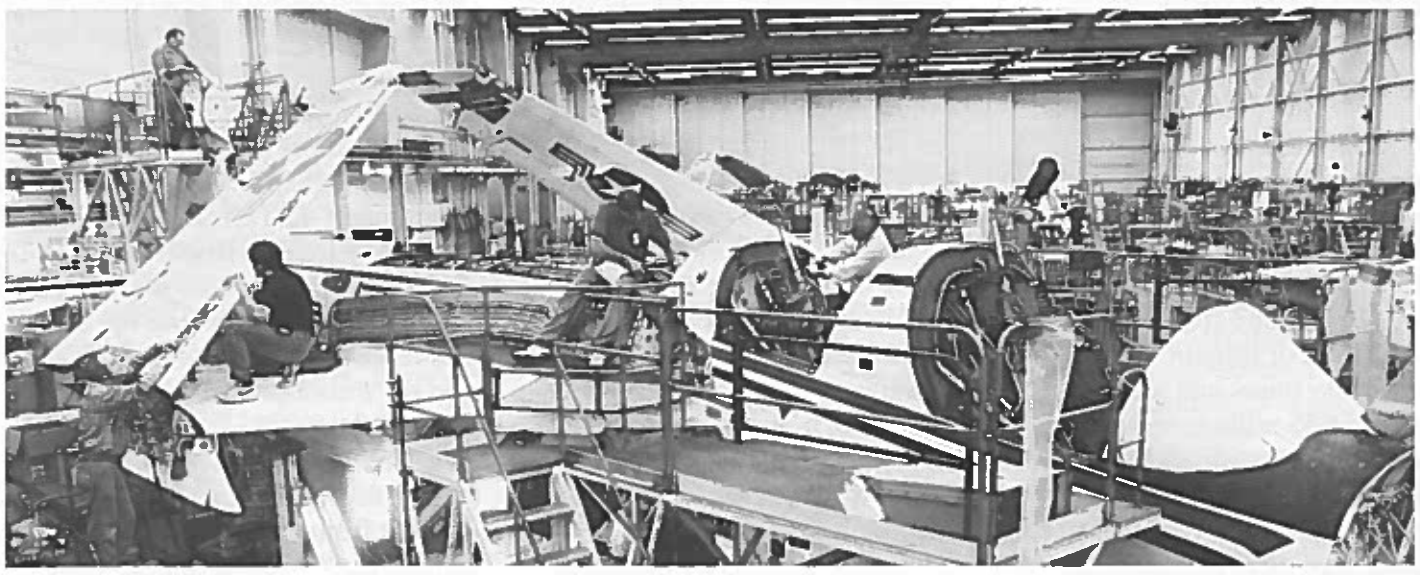
A Hole In The Budget Won't Sink Prowler Program

"Many people believe that the Grumman Prowler is no longer a viable program because the recent Presidential budget submission did not contain a request for new EA-6B production aircraft. Nothing could be further from the truth," says Program Vice President Dan O'Neill.

The EA-6B is still very much alive and healthy.

"We have production authorized through fiscal 1989 and that equates to 30 new aircraft yet to be delivered," O'Neill says. "The Prowler has the biggest backlog of orders in its history — despite that glaring gap in production for fiscal year 1990!"



Advanced Advancing. *Prowler P-5 will be the first of three Advanced Capability prototypes to be completed. It's now in the final assembly stage in Calverton, where Grummanites (from L, foreground) John Doroski, Steve Attard , Mike Remski and Bill Fallon and (background) Ray Oudeans, work to complete the plane. Its first flight is scheduled for June. (Photo by Gerry Costello)*

The program also continues its research and development projects. In fact, O'Neill says, those efforts are extensive. Modification programs remain intact with new updates in the planning. The budget submitted to Congress reflects a major remanufacture effort in fiscal year '91 that will bring all fleet aircraft up to the Advanced Capability (ADVCAP) configuration.

Dan O'Neill

O'Neill understands Grummanites' concerns when they read that federal budget cutters are targetting military programs for reduction. He accepts the realities of the nation's financial condition, pointing out that the Bush Administration will come under extreme pressure to reduce military spending.

"In spite of all that, there is still hope for fiscal year 1990 production," he says. "Without new aircraft, it appears that there will be a shortfall in the number of Prowlers in the fleet by the mid-'90s." For this reason, he thinks Congress might choose to fund production of the aircraft in fiscal year 1990.

"There is also much research and development work being done to keep the program on track," says O'Neill. Since 1984, under a $255 million Navy contract, Grumman has been developing the ADVCAP version of the aircraft. New laboratories opened last year in Building 110 in Melville to develop the software and test new equipment, which includes the new passive detection system being built by Litton, a system that will start flight tests later this year.

Grumman is also negotiating the contract for the Vehicle Enhancement Program, which encompasses aerodynamic changes to give better flying qualities to the EA-6B. This program will include modified engines and additional external store stations.

In addition, Grumman is putting a lot of effort into finalizing the Avionic Improvement Program contract by mid-year. The program is also under contract to develop a source for a new communications radar exciter for the aircraft. The test aircraft in these development programs will serve as validation for the fifth generation of the EA-6B.

The program is continuing to win competitive contracts, such as the pod radomes, and the Computer Interface Unit/Encoder (CIU/E), which is an integral part of the Block '86 changes. The EA-6B production and modification programs recently incorporated the CIU/E and other Block '86 changes into the production line at Calverton, where a new EA-6B lab and office building opened last year. O'Neill says the spin-off from these changes may result in a new proposal to bring 68 older ICAP-2 models to Grumman for modification and the addition of many safety improvements.

According to O'Neill, the EA-6B program has many proposals outstanding. Their potential value, in combination with the value of current contracts, will bring the program's worth to more than $3 billion. The Integrated Logistics Support program is a major contributor to the sales and profit picture of the program. O'Neill says that ILS has been responsible for about $100 million in sales annually over the last several years. This trend should continue.

"The program ranked very high in profit for the Aircraft Systems Division in 1988 and we expect to maintain that position in 1989," he says. "Moreover, we exceeded our 1988 operating plan for both sales

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Grumman Reports Increased Earnings For 1988

'Last year reversed four years of declining earnings for Grumman,' says O'Brien

On Thursday, February 2, Grumman reported 1988 net income of $86.5 million or $2.50 a share compared with $35.7 million or 94 cents a share in 1987. Sales increased eight percent to $3.65 billion from $3.38 billion.

1988 net income included a third quarter benefit of $11.1 million or 34 cents a share from an accounting adjustment for New York State franchise taxes. In 1987, net income was after an unusual charge of $26.4 million or 80 cents a share from the settlement of litigation over New York City buses and an unusual gain of $35 million or $1.07 a share from the adjustment of deferred taxes. Also, the fourth quarter of 1987 included an after-tax charge of $36.6 million or $1.12 a share from the settlement of an F-14D contract dispute with the U.S. Navy.

In the fourth quarter of 1988, sales increased to $1.04 billion from $947.3 million in the year ago period. Net income in the quarter was $24.1 million or 70 cents a share. In 1987, the company reported a fourth quarter net loss of $42.4 million or $1.33 a share.

Sales in the aerospace segment increased six percent in the year to $2.64 billion from $2.49 billion. Operating income in the segment increased to $140.5 million from $41.3 million in 1987. Sales and income were up from year to year primarily from the delivery of nine more F-14s to the Navy. Eight were delivered in 1987, 17 were delivered in 1988 and another 17 are scheduled for delivery this year.

In the fourth quarter, aerospace segment operating income was $42.8 million compared with a loss of $22 million in the year ago quarter. When the 1987 quarter is adjusted to exclude the $60 million pre-tax F-14D settlement, 1988 fourth quarter operating income increased 12.8 percent over the 1987 quarter. Sales on a comparable basis increased three percent to $761.6 million.

In the electronics systems segment, sales for the year declined to $514.4 million from $617.2 million. Operating income declined to $8.5 million from $8.7 million. Revenues for the U.S. Air Force's and Army's Joint STARS radar aircraft program were down in accordance with the government's spending plan for the five-year development program.

On December 23, the first Joint STARS test aircraft completed a successful first radar test flight of almost seven hours. However, the program has been a technical challenge to Grumman, its suppliers and customers. That challenge is being met. But it has caused what Grumman estimates to be a nine-month slip in the original program schedule. The company continues to assess the total effects of this delay.

In the special purpose vehicles segment, 1988 sales increased 52 percent to $380.7 million from $250.5 million. Operating income increased 28 percent to $10.9 million from $8.5 million. The U.S. Postal Service delivery truck was in its first full year of production with 18,850 trucks delivered, up from 7,580 vehicles in 1987. While performance on the Postal Service contract was strong, income for the segment was adversely affected by increased material costs, primarily for aluminum, in the commercial truck body operation and non-recurring start-up costs at the new centralized parts fabrication center.

Sales in the information and other services segment for 1988 totaled $544.3 million, a 20 percent increase from 1987's $452.7 million. Operating income for the year of $58.1 million was a 15 percent increase over $50.5 million in the prior year. The improvement was due primarily to the first full year of the Space Station Program Support work for NASA.

"Last year reversed four years of declining earnings for Grumman," said Grumman Chairman John O'Brien. "Our 1988 operating income improved 24 percent after adjusting for the F-14D contract settlement in '87 and the franchise tax adjustment in '88.

"The margins in aerospace, our largest segment, increased to 4.7 percent from 4.1 percent after the adjustments," he continued. "But while our operations improved, interest expense grew with added debt. Interest last year was $84.9 million, up from $58.9 million. Long term debt was $802 million at year end, compared with $643.2 million a year before.

"We and most of the aerospace industry are being forced to borrow because of changes in government progress payments and changes in the tax laws," O'Brien said.

"Besides these changes to our cash flow, we are starting to experience tight defense budgets," he added. "This year our 32,000 person work force will be reduced by 3,100. We have completed a January layoff; further reduction will be by attrition. Included in the layoff are workers on the A-6G development program which the Navy stopped in December.

"We are winning new work. In our Data Systems Division, we brought in three contracts last year, each with a revenue potential of more than $100 million. Two were for the Air Force and one was for the Marine Corps," he said.

"We are making decisions necessary to make Grumman a more efficient supplier for all its customers and to improve our competitive position for new business," O'Brien concluded.

Test Program Off The Ground. *The Multistage Improvement Program OV-1 Mohawk undergoes tests in the anechoic chamber in Calverton, Long Island. Later, the plane will be put through a series of flight tests here. The Multistage Improvement Program gives the plane new cockpit electronics, navigation and communications gear. (Photo by Gerry Costello)*

Prowler Program Has A Healthy Look

(Continued from Page 1)

and profit. The financial outlook for the program remains steady and the potential is encouraging."

O'Neill recalls that, "When the concept of an electronic warfare variation of the A-6 came up in the 1960's, we expected to build only 42 aircraft. One hundred and forty have been delivered to date; 68 of these have been modified at least once. Some have been through our factory three times! We don't let them become obsolete.

"Our competitive edge is the talent of our people," he says. "Our talent is home grown. Electronic warfare is not the usual college course in a student's quest for an engineering degree. Finding people with these skills is a problem.

"This is, however, a challenging and dynamic discipline," O'Neill says. "When people get involved, they tend to stay. Many of our key people are long-term employees that started with the program and will probably be in this business for their entire careers."

Right now, there is no planned replacement for the EA-6B. Although there are concepts being explored, a new vehicle isn't expected before 2005. "Whether the Navy buys new production Prowlers or remanufactured aircraft," O'Neill says, "the Navy will be depending on the Grumman EA-6B for a long time to come."

I Heard It At The Pin Meeting

O'Brien Says Fight Is Not Over For A-6 Or EA-6B In FY 1990

On January 13, Grumman Chairman John O'Brien met with Grummanites who recently celebrated their anniversaries with the company. Highlights of that meeting follow:

John O'Brien: Good morning. I guess the biggest topic on anyone's mind is the layoff.

As you all know, we're in a tough fight right now. Defense budgets are being cut. We didn't have a choice: we had to have a layoff.

We try very hard to be fair in what we do. But I also understand that there is no way I can look you in the eye and say to you, "I'm being fair, but I have to let you go," and have you accept it as a fair decision.

Nonetheless, cuts are being made across the total corporation. They're not being concentrated in any area. They're being made because we've run out of work for some people, and we have to protect the jobs we still have. We have been through it before. I went through it when we came down by 10,000 people in one year, and that was even sadder.

I can tell you that even though the A-6 is not in the 1990 budget, the fight is not over. There are funds for the development of the Advanced Capability EA-6B in the 1990 budget — but there are no EA-6B's in that budget. That fight isn't over, either.

We expect the defense budget to be flat in 1990. We have people working to get out the message that we've taken our hit, now go hit somebody else. I'll be traveling next weekend, trying to get additional business in here for us, particularly in production areas.

There are 18 F-14s in the 1990 budget, and we think we're going to win the battle of the Tomcat-21 because the Navy wants it.

We've made some changes to the BSTS structure so that we can go out and win that thing in late 1990. Joint STARS had an absolutely stupendous flight in Melbourne just before Christmas. There's potential there for $10 to 20 billion for us through the 1990s.

So I'm not preaching gloom and doom. I think we have a bright future. We'll come through this a stronger company, even though it's very painful. We have a lot going for us, but we have to increase the efficiency of the corporation, which is part of the reason for the layoffs.

Now, how about some questions?

How long is this going to go on? Are the layoffs going to be dragged out?

O'Brien: We hope to have it over by the end of January, and we're making good progress in getting there. [Editor's note: With only a few exceptions, the layoffs were completed by February 3.]

In Grumman World, *you said that you were concerned about losing people under 35. I was wondering if you have any plans to pay them more so that they'll stay.*

O'Brien: That's a reasonable question. But I don't think paying them more is the only answer. I met recently with some young people in our company (they seemed young to me, anyway — they were about 35). I listened to what they said about what's going on here, and about things that they thought were stupid. I asked them why the young people they knew were leaving — and the predominant reason given was housing. They can't afford to buy a house, they can't rent an apartment without three of them in it. And I really can't fix that.

"We've tried very hard not to discriminate against anybody, for age or any other reason...."

As you know, I have been talking publicly to our officials about the problems on Long Island. We have problems with Long Island Lighting, we have problems with our school districts. But you have to help me with the fight. You elected legislators to represent you — raise hell with them! You don't have any problems raising hell with me or sending me letters; you should let your representatives know how you feel, too!

And by the way, if you sign the letter you write to me, you'll get an answer. It's very frustrating to get a letter that complains about something and it's signed, "A loyal Grummanite." I appreciate the loyalty, but if you sign the letter, you'll get an answer — and no repercussions, believe me.

It appears that older people were targeted for the RIF [reduction in force]. What kind of people is the company looking for? Because I feel that our experience enhanced this company and put it where it is today.

O'Brien: You're absolutely right. Experience is very important in the business we're in. Your impression about the RIF is incorrect: nobody's been targeted. The average age in the company is 43. I think that by the time the layoff is over, the average age of the person who was let go will be about 43. We've tried very hard not to discriminate against anybody, for age or any other reason, and nobody's targeted.

How do you deal with affirmative action in a RIF?

O'Brien: In the RIF preceding this one, I made it very clear to the RIF boards and to our management that I expected to maintain the sensitivity to affirmative action. Statistically — and I don't think that's the right way to look, but it's the only way you *can* look — I don't see any signs of discrimination. This RIF is being handled the same way.

"Just being here for 12 months is not any reason for a raise."

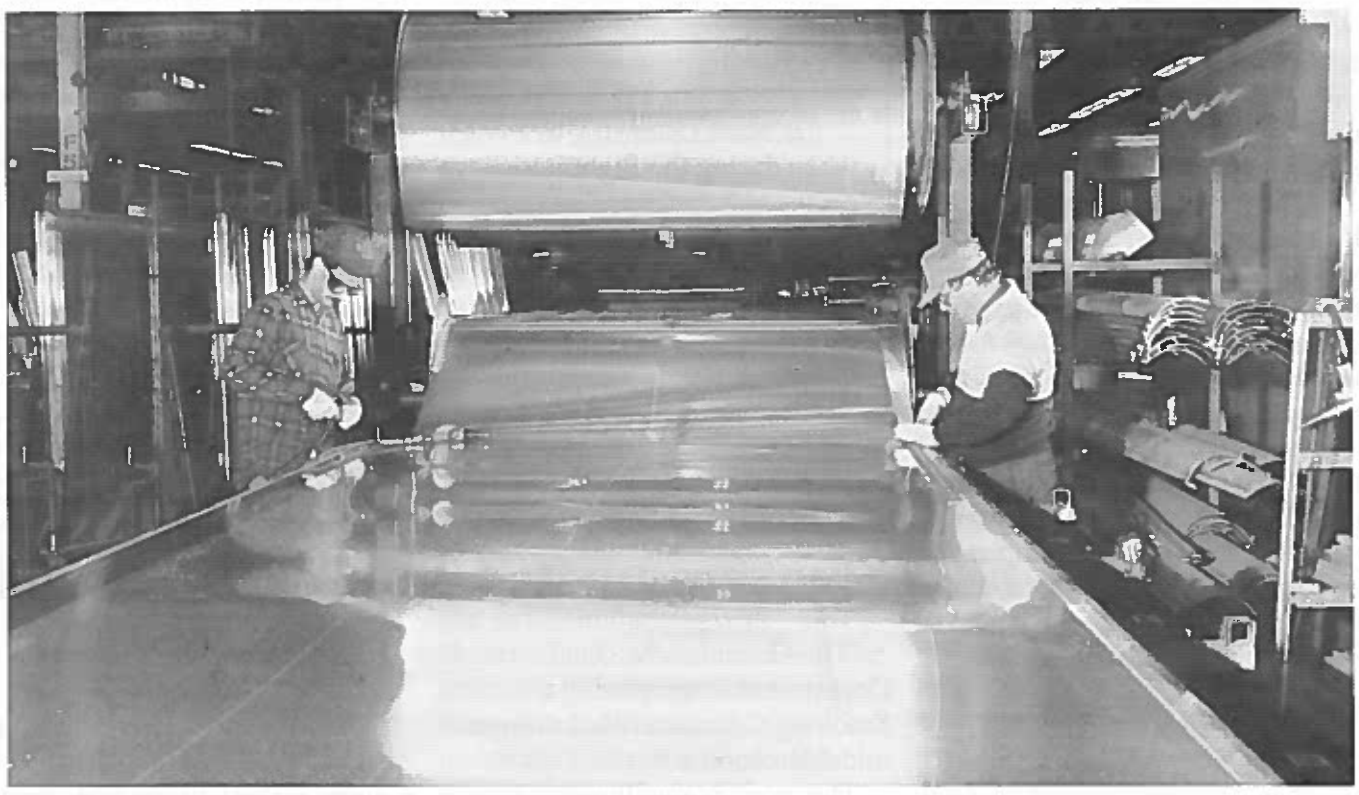
For those who are left, how will the RIF affect our raises? Will we be rewarded if we're asked to take on more responsibility?

O'Brien: My policy is that those people who are taking added responsibility, added risk, figuring out how to do their jobs better, striving to improve this company, should get raises. Just being here for 12 months is not any reason for a raise. Now, that's a cultural change at Grumman. I've been here long enough to know that many departments have everybody on a computer. You come in some morning and the computer is going "Ding, ding, ding! Twelve months are up — time to give someone a raise!" I want to stop that. If you're a performer, you get a raise.

Will the percentages be higher?

O'Brien: I will not answer percentage questions because we're not running this company on percentages, we're running it on dollars. Your department is your bakery. You have X dollars to give out. You'd better be able to explain to me why the people working in your bakery aren't turning out more product if we're giving them more money. In this country, we can't keep giving out more money and not getting more product — unless we want to learn to speak Japanese. Or German.

(Continued on page 4)



Just Like New. *At Grumman Olson's plant in Mayfield, Pennsylvania, Mark Nolan (L) and Ron Williams install the roof skin on a Kurbmaster truck. This facility, northeast of Scranton, specializes in refurbishing veteran trucks as well as supplying owners with spare parts. (Photo by Bob Settles).*

Pin Meeting Notes

(Continued from page 3)
Anyway, I really don't want to talk about percentages because percentages are baloney.

It's just that I understand the system — and sometimes I don't see the system as being fair.

O'Brien: Neither do I. And I understand that. Because fair is a very tough word to define; what I think is fair, you might not. But I'm trying to get people to understand that when they give money to people, they have a right to expect something for that money. When people expect a raise, they have an obligation to be doing something to deserve it other than just putting in time.

If one of the purposes of the RIF is to lower our overhead in manufacturing, do you feel that we'd be more competitive if we brought our own work back in-house?

O'Brien: We send work to outside vendors for more than just competitive reasons. They may have specialty equipment that we don't have. They may have specialists we don't have. Or they may be in Senator Gobbledy-gook's area and I want to talk to the senator about why I want A-6s. You may not like the fact that it's a political business, but it is.

What incentives are the governments of Nassau and Suffolk counties giving to Grumman to keep us on Long Island?

O'Brien: None. When they raise my employees' taxes so much that they can't afford their houses, they're not giving me any incentive. I don't understand why the counties don't have RIFs. I don't understand why they can't face their people the way I face mine. I don't understand why they don't freeze employment. There are about 90,000 government employees working in Nassau and Suffolk: about one government employee for every four other workers. That's more government than the Russians put up with. Again, you've got to talk to your elected officials.

A couple of years later, do you think divisionalization was a mistake? It seems to me that now we've got all these little kingdoms and bureaucracies...

O'Brien: Do I think divisionalization was a mistake? No. Do I think it was managed well? No. It got out of hand, bureaucracies sprang up. But part of the problem was that some of the businesses that divisionalization would have fed on started drying up. That's why we're combining some of those divisions. We're regrouping things as we see the markets developing.

On the other hand, if we hadn't made Melbourne a division, we wouldn't have a Joint STARS program. The Air Force wouldn't have given it to us.

Do you think there's a future for the Tomcat-21?

O'Brien: Absolutely. The Tomcat-21 fits what the Navy wants. They invested a lot of money in the 1960s to have an airframe design that could be exploited for a long time. We did a superb job. It is our opinion that the Tomcat-21 will do 90 percent of what the Navy version of the ATF will do, for about 60 percent of the cost.

There's a lot going on that I can't talk to you about — things that would make you feel better about the future. But I think Tomcat-21 has a great future in the economic conditions we're dealing with, and all the Navy operational people we've briefed support it.

Is there any truth to the rumor that the Data Systems building in Holtsville [L.I.] is closing?

O'Brien: No, no truth to that. But I have no doubt that it's being looked at, because we're looking at everything. I'm examining everything we have to see if we need it. I would have no hesitation in closing it if it were the right thing to do for the company, but there are no plans to do so. Now, we *are* going to develop some of the acreage just east of that building. And there are plans to look at Building 4 and Building 1 to develop that property; we've talked about that before.

I work in Melville [L.I.] in a building not owned by Grumman. For about five years, we've been hearing that we're moving into Bethpage. Are you going to pull everyone together into Grumman-owned buildings, or will we remain where we are?

O'Brien: Both. It depends on the situation and on some programs we want to win. I know it causes turmoil, that it's upsetting for people in those buildings to hear every day that we're moving you here or there. But the business changes so quickly, it's difficult. I would like to get out of those leased buildings, which are more expensive than our own property as the leases unravel. I'd also like to sublet them where we can. We're looking at all the options.

Grumman World Next Issue: February 24

He's A Winner. *Ray Geminski, a flight test instrumentation technician, is one of 1988's top Project Sterling award winners. His suggestion won him 264 shares of Grumman stock. Geminski found a way to detect fuel bag separation from the F-14 airframe.*

He's Got It In The Bag

"Looking to do things better is just part of the job out here," says Ray Geminski. "Getting a Project Sterling award just makes you feel good about what you do."

Geminski is a flight test instrumentation technician in Building 7 at Calverton. His Project Sterling suggestion saved the company over $72, 000 last year. For coming up with a way to detect fuel bag separation from the F-14 airframe during flight, he received 264 shares of Grumman stock.

The fuel bag contains the fuel for the aircraft. It sits inside of and is attached to the aircraft's fuel cell – "Like a gas tank with a rubber bladder," explains Geminski. "For some unknown reason, the bag separated from its fuel cell during two test flights.

"It wasn't known why or when during the flight it occurred," explains Geminski. "However, it took quite a bit of rework time to put it back together." In addition, he says, after subsequent flights, the only way to find out if it had happened again was to drain the fuel and inspect the fuel bag and its components. Then you have to refuel the aircraft and check for fuel leaks before the next flight."This would take hours," says Geminski. "Instead of making three test flights in one day, there would only be time for one."

Close to 350 measurements are taken on an aircraft during a test flight. He suggested adding another measurement by wiring the fuel bag and monitoring its activity from the automated telemetry station.

A single wire was attached to the bag and the cell. When and if that wire is broken, the vehicle flight test people would know exactly when it happened and during what maneuver. The pilots would be alerted and instructed to return immediately.

"This is serious business," says Geminski. "It's our job to make these flights run smoothly and as safe as possible. Getting an award for it is extra."

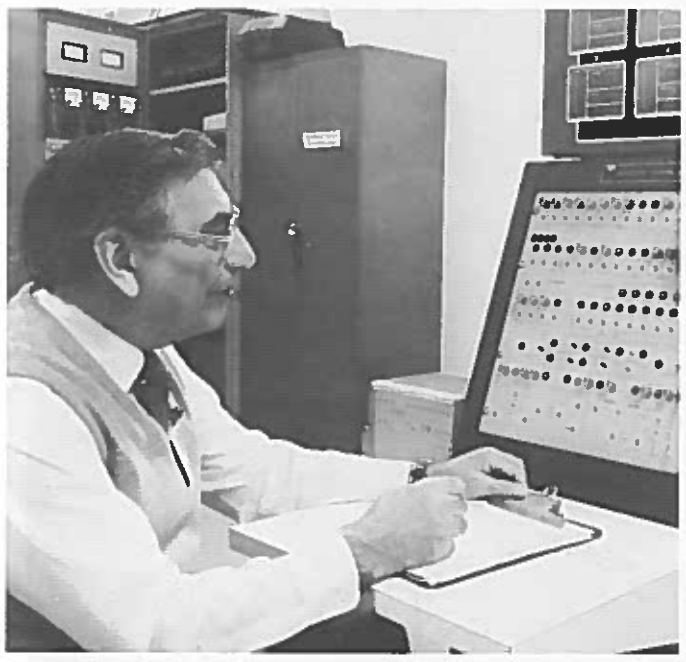
This is Geminski's second Project Sterling award. He's been working at Grumman for over 23 years and has no intentions of selling his stock. "I think I'll hold on to it for my retirement," he says.

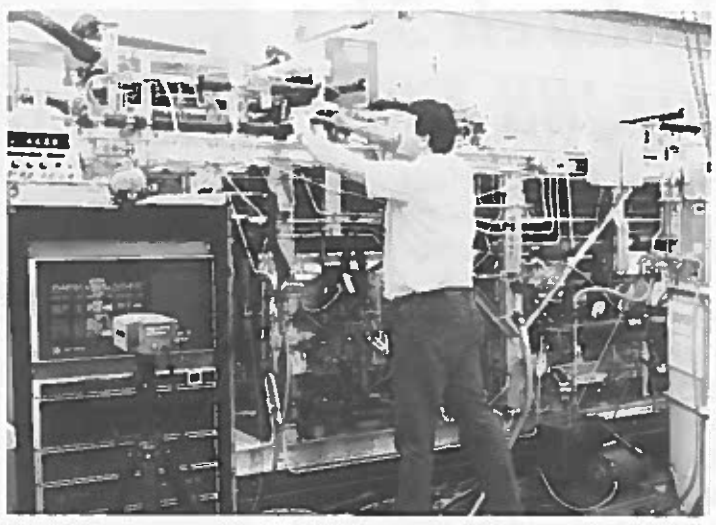
Smokers Invited To Kick The Habit

The Grumman Medical Department is sponsoring a Smoking Cessation Workshop in mid-March.

The workshop will meet twice a week for two weeks from 4:30 to 5:30 p.m. in corporate headquarters. Grummanite David Marsden is the facilitator; he is an American Cancer Society volunteer.

The workshop costs $25; bring checks payable to the American Cancer Society to the first session. Space is limited; first come, first served. Call Ada Colter, coordinator of Nursing Services, 575-3723, to register.





Climate Control. *Al Posillico (L) monitors the control panel for the space station's thermal bus, which will keep the entire station at the same temperature. At R, Dennis Wahmann installs insulation on a pipe.*

How To Keep The Space Station Cozy

Grumman Space Systems Division is bidding to design a temperature control system for Space Station *Freedom.*

Grumman is competing against Boeing and Lockheed for a full-scale development contract. Grumman's entry consists of a thermal bus in which a network of pipes containing ammonia would pick up waste heat from the station's modules and experiments, and radiators that would reject the heat into space. The competition is scheduled to be decided this summer.

Hardware contracts for the space station were awarded at the end of 1987, in four work packages by four NASA centers. However, this particular system has been put up for bids once again by McDonnell Douglas, the prime contractor for work package No. 2, because of problems with the hardware designed by the current thermal-systems subcontractor, Lockheed.

The stakes are high: estimates of the dollar value of the contract are in the $300 million range. And once the technology is perfected, it could have use on future NASA and Air Force spacecraft.

Temperature control will be needed for proper functioning of the station's equipment and scientific experiments, as well as comfort for the astronauts who will be on board for months.

"The thermal bus would keep the station at a constant temperature," says Rich Brown, the Grumman thermal bus project engineer. "The ammonia in the pipes would transfer heat from the station's modules to radiators, which would expel the heat into space. In turn, the cooled ammonia would flow back to the modules. It would be a continuous process."

The Grumman thermal bus is a two-phase system: the ammonia is present inside the pipes in two forms, liquid and vapor. Cooled liquid ammonia is pumped into evaporators. Waste heat from the station's experiments and modules warms the ammonia, which evaporates. Vapor from each evaporator is collected in a common transport line.

At the other end of the station structure, the heated ammonia vapor goes into condensers coupled to radiators. As the heat is expelled into space, the ammonia inside once again liquefies and is then recycled.

"A two-phase system uses much less pumping power than a single-phase system, such as the space shuttle's freon cooling system," says Brown. "It will be important to minimize power consumption aboard the space station because there will be a limited amount available."

Another advantage is that the Grumman-designed thermal bus can work two ways. Separate lines can be provided for the liquid and vapor, or the two can pass through the same pipes, providing the same climate-controlling advantages.

The Grumman thermal bus design is the culmination of research under way since 1979. The system is called a thermal bus due to its similarities with electrical-utility bus networks. The ammonia-filled pipes can be likened to the electrical cables inside the walls of a house. The astronaut could gain access to the system from a number of different places. The ammonia fluid will evaporate at a constant temperature, keeping the entire station at the same temperature continuously.

The system has been operated at Johnson Space Center, where NASA has tested it for performance. NASA has conducted similar evaluations of hardware built by Boeing, while Lockheed's will be tested in March.

"Ours is the simplest of the three systems," says Brown. "And NASA wants to keep the space station components as simple as possible. Additionally, our design's pump consumes the least power of the three."

Other tests have been conducted in a diving tank using a 30-foot-long trough segment. It houses the pipes and would be a building block of the thermal bus structure. Such tests have measured the ease of assembly in orbit; the water simulates the neutral buoyancy of space.

"So far, our design has performed very well," says Mark Hutchison, a Grumman engineer in Houston working on the project. "Another advantage to the Grumman design is that the structure folds up like a yardstick. Such a structure would stow easily in the cargo bay of the space shuttle, which would have to truck it into orbit."

Grumman's design for the station's radiators will be put to the test aboard the next launch of the space shuttle *Discovery,* scheduled for mid-March. The 50-foot-long Grumman radiator will be mounted on the starboard sill line, just inside the shuttle bay door.

While in orbit, the doors will be opened, a heating element will be turned on, and the device's ability to radiate up to two kilowatts of heat will be measured over six hours.

"This experiment has been scheduled to fly for a long time, and was delayed over two and a half years by the *Challenger* explosion," says Brown. "It is one of the most important shuttle tests we've ever been involved in."

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Laser Toner Cartridges Get A Second Life

Grummanites on Long Island can now obtain remanufactured toner cartridges for Apple, Hewlett-Packard, and Wang laser printers.

The cartridges are available in the Data Systems Division stockroom, Grumman Headquarters.

To get one, provide an approved material release authorization (following your division's guidelines), plus an empty toner cartridge packed in the original box, to: Tony Vavricka, mailstop B15-GHQ. His telephone number is (516) 575-8717.

Due to the size of the packages, you cannot send them in interoffice mail. However, check with your building manager or administrator for interplant shipping arrangements.

"Remanufactured toner cartridges offer several benefits to Grumman," says Lynn Murphy, manager, Technical Administration for Data Systems' End User Computing department. "The price of the cartridge is half that of a new one."

In addition, Data Systems has set up an open purchase order with the vendor, which cuts down on the paperwork. Normally, the Data Systems Procurement Department has to write a separate purchase order for every requisition that comes in.

"Remanufactured cartridges also keep used cartridges from being discarded and becoming solid waste," adds Murphy.

The recycled cartridges were tested for nine months in Grumman departments that use their laser printers extensively. They were determined to offer good quality.

The cartridges are available for the following models: Apple M0156 and M0160 Laserwriters, M0169 Laserwriter Plus, M6200 Laserwriter II SC, M6210 Laserwriter II NT, and M67215 Laserwriter II NTX; Hewlett-Packard 33440A Series II, 2686A Standard LaserJet, 2686A LaserJet Plus Option 300, and 2686D LaserJet 500 Plus; and Wang LPS-8.

By participating in this recycling program, you'll also be supporting the United Way of Long Island. The vendor, Brookrock Corporation, has offered to donate $5 in Grumman's name for every usable empty cartridge received.

The handling of off-Long Island facilities will be announced at a later date.

For further information, contact Lynn Murphy at (516) 575-9840 or call Maureen Small at (516) 346-9859.

You Have Until March 31 To Draw On Your '88 FSA

You are in a jam. You have about $500 left in your supplemental health care flexible spending account (FSA) for 1988. What do you do?

If you had health expenses in 1988 that can be reimbursed by your flexible spending account, you have until March 31 to file a claim.

A health care FSA may be used to pay for a host of expenses, as well as the unreimbursed portion of covered services.

There's one important catch: the FSA covers your out-of-pocket expenses, so you must settle the bill first. Some examples include: insurance plan deductibles and co-payments; routine physicals; cosmetic surgery; immunization shots; and health care-related transportation costs.

Uninsured dental care may also be reimbursed with FSA money. Such expenses include deductibles, expenses in excess of the maximum limits of an insurance plan, cosmetic dentistry, and orthodontic care.

Did you have any eye exams, or buy any eyeglasses, during 1988? Eye care is also covered by the health FSA — exams, treatment, frames, lenses, and contact lenses.

Any health expense that's eligible as an Internal Revenue Service deduction, as outlined in IRS Publication 502, can be reimbursed through the FSA. But the expenses for which you plan to use your FSA cannot also be itemized on your tax return for that same year.

Dependent day-care expenses for 1988, as defined by IRS Publication 503, are also eligible for reimbursement through March 31, under the dependent care FSA.

FSA "withdrawal request forms" should be forwarded to The Travelers, along with proof of payment.

Employees with less than $100 remaining in their FSAs, take note: reimbursements that should have been issued during the first week of January will be issued, along with January claims, on February 4.

For further information about your account, contact the Travelers Insurance Co., (516) 296-2800.

Family Day
On November 13, 1988 I went to Grumman Family day with my father. I went to plants 3 and 4 In plant 3 I saw how they made parts for airplanes. I saw the wings of a plane I watched the guards check everyone to see if they had their name tags on I saw where they paint the parts for the planes My father showed me the big trucks that bring the parts for the airplanes in. we went to see the place where they make the emblems that they put on the planes. They gave me some and I put them on my school books I saw all the soda and candy machines for the people that work there. At plant 4 I had ice cream and milk. I also got a frisbee. We went and listened to the Grumman Band play. I saw the plane that flies over my house, the E-2C I saw fire trucks and a real old plane. I saw the plane the bosses use. By then I was really tired, so we got a soda and some potato chips and listened to the band again. I want to thank Grumman for letting me see everything. Maybe someday they will let my school come and see all the things I saw. I had such a good time!!
Thank you,
Christine Galante
FABRICATION

Young Reader. *Christine Galante, daughter of Building 3's Ron Galante, sent us this poster after attending "Family Day" in November. (Photo by Marie Trimborn)*

It Didn't Fit In Our Mailbox

The letters *Grumman World* receives usually come from employees and retirees. Nine-year-old Christine Galante's letter was an exception.

Not only did she write to us — her letter was on a very nice poster. She sent it to thank Grumman for the good time she had at Bethpage Operations' "Family Day" in November. She attended with her dad, Ron, who works for Interplant Transportation in Building 3.

We thought you'd enjoy it.

"On November 13, 1988, I went to Grumman Family Day with my father. I went to Plants 3 and 4. In Plant 3, I saw how they made parts for airplanes. I saw the wings of a plane. I watched the guards check everyone to see if they had their name tags on. I saw where they paint the parts for the planes. My father showed me the big trucks that bring the parts for the airplanes in.

"We went to see the place where they make the emblems that they put on the planes. They gave me some and I put them on my school books. I saw all the soda and candy machines for the people that work there.

"At Plant 4, I had ice cream and milk. I also got a frisbee. We went and listened to the Grumman Band play. I saw the plane that flies over my house, the E-2C. I saw fire trucks and a real old plane. I saw the plane the bosses use.

"By then I was really tired, so we got a soda and some potato chips and listened to the band again. I want to thank Grumman for letting me see everything. Maybe someday they will let my school come and see all the things I saw. I had such a good time!

Thank you,
Christine Galante

Obituaries

Paul Power Jr. of Metallurgical Engineering, Hicksville, Aircraft Systems Division, died Jan. 19 at the age of 59. He had been with the company since 1964 and resided at 16 St. James Pl., Rockville Centre, N.Y.

Joseph A. Smith of Electromagnetic Effect, Melville, Aircraft Systems Division, died Jan. 1 at the age of 65. He had been with the company since 1959 and resided at 20 Teaneck Dr., East Northport, N.Y.

Charles D. Warren of Material Management, Bethpage, Aircraft Systems Division, died Dec. 22 at the age of 60. He had been with the company since 1952 and resided at 89 Centerport Rd., Centerport, N.Y.

King A. Washington of Maintenance, Bethpage, Aircraft Systems Division, died Nov. 11 at the age of 51. He had been with the company since 1973 and resided at 745 Nicolls Rd., Deer Park, N.Y.

Personals

My daughters Marianne, Gloria, Joanne and I would like to thank our many friends and the ESO at Grumman for their kind expressions of sympathy and support during the recent loss of my wife Mary. **Frank A. Tessitore**

My family and I sincerely wish to thank all my friends, co-workers and ESO for their concern and many kind expressions of sympathy, prayers and support during the recent loss of my father. **Ron Anders**

My family and I sincerely wish to thank friends, co-workers and ESO for their concern and kind expressions of sympathy and support during the loss of my father George Harrison. **Lynne Harrison**

My family and I sincerely wish to thank all our friends and co-workers for their sympathy and assistance during the recent loss of my father. **Carly Eng Carter**

My family and I would like to thank all of Tony's friends and co-workers who expressed their kind sympathies and who were present for us during our time of loss. **Claudette Asaro**

With deepest gratitude I wish to thank the Grumman Corporation, Melbourne Systems Division and all of my co-workers for their support and well wishes during my recent illness. **Don Hrubes**

My family and I wish to sincerely thank my co-workers and ESO for their support and kind expressions of sympathy during the recent loss of my father. We would like to extend a special thanks to Charles Hedges, John Billone, Sal Greco, Tom Langtry and Kurt and Karen Eberl. **Thomas Zimmardi**

My family and I would like to thank everyone for their support and comfort during the recent loss of our precious son. Whether you sent a card or flowers, brought us food, made a donation in Anthony's name or just sat and held our hand, knowing so many cared was welcomed at a time when we needed it. **Frank Daidone and Family**

I would sincerely like to thank my co-workers and ESO for all their support during my recent hospital stay. It is difficult to express how much all the cards and phone calls meant to me and how much it helped me get through and cope with my injury. Thank you all very much. **Craig Gluf**

A Call For Arms

So, you took the plunge and signed up as a Grumman blood donor for 1989. You got a card from your personnel administrator telling you the time and day to report to give blood in your building.

But when your turn comes, you're too snowed with work, and you miss the appointment.

There are other ways for you to give blood. Check with your administrator or the Blood Program, (516) 575-8920, to find out where and when the next blood drive will be. Or, you can donate at Long Island Blood Services, 155 Duryea Road, Melville, New York. The hours are: Monday through Friday, 8 a.m. - 8 p.m.; Saturdays, 8 a.m. - 1:30 p.m.

Give the nurse the Grumman account number (3863) and your donation will be included in Grumman's tally. If you have family members who give, tell them to do the same. Their donations will also be credited to Grumman.

At left, facilitator Mark Rosen (R) of ODI meets with a GQ team from Corporate Development (L-R): Dick Henkel, Dave Walsh, Ron Spencer, Bern Kovit, and Fred Edwards. Above, Dick McGuire, Dick Kosse, Mike DeSanto, Art Leach and Walter Smith, discuss a GQ topic in Personnel and Administration.

GQ: Problems Get What They Deserve

As the months roll on, Grumman Quality action teams are gathering facts and looking at their problems in ways they have never done before. Most groups agree, although they knew these problems existed, GQ has provided a structured method and team environment for resolving these problems.

So far, 66 teams have been formed company-wide and new groups are forming every week. Here's a look at three teams working towards solutions.

Speedy Response

Each year, Data Systems gets over 900 requests to either install or relocate computer terminals. One GQ team wants to improve the process and decrease the response time.

"Someone unfamiliar with the process may ask, what's so difficult about moving a terminal?" says Lester Fox, director, Intercorporate Services. "You pick it up, put it where you want and plug it in."

In fact, several groups get involved in moves. Network people oversee the move while designing the layout of where the terminals should be situated. The Facilities department in Corporate Services must make sure there is sufficient power at the new location and install proper cabling, if necessary.

The User Services group is the liaison with the customer and decides when the move should be, and the folks from Systems Support actually move the equipment. "The Grumman Quality process has allowed the problem to be seen in all its detail," says Fox.

The team has come up with several reasons why service is not as fast as they would like it to be. One is priority.

"A group of 100 terminals is given preference over the one person who only needs his terminal relocated," says Fox. "But with the volume of such requests, that same person may wait quite a long time."

The group would like service to be guaranteed within a predetermined number of days. The team is now compiling data to determine how long that should be.

Proposal Teams

Preparing proposals is similar to publishing a newspaper: the pace is quick and there is no time to spare. A quality action team in Personnel and Administration wants to take some of the pressure off by speeding up personnel clearances for classified proposals.

Many of the support people who work on proposals — such as typists, editors, printers, and shipping people — actually work in Administrative Services. They are loaned to the Proposal Center when needed.

"When the proposal is classified, it can be a problem to get them their security clearances in enough time to meet the proposal's deadline," says Dick Kosse, deputy director, Administrative Services.

This type of proposal usually comes with an allocation of clearances allowed at any one time. "If that number is 100, for example," explains Kosse, "proposal management must carefully schedule when people begin and end their assignments. By the time the support personnel are called in, there's usually a time crunch."

In addition, when people are pulled from Administrative Services to work on proposals, they leave their full-time jobs behind for weeks or months at a time. "Identifying, in advance, the people needed from our area would not only allow us to get the special security clearances," says Kosse. "It will help us to better manage the workload here."

The group has gotten together with Security and the Proposal department to try to define ways to better manage the timing of the requests for personnel.

Marketing Literature

A Corporate Development action team is working to improve the way marketing literature is produced.

"Prior to divisionalization, Grumman Aerospace Marketing management worked with individual personnel to create brochures and other literature for its various products and services," explains Ron Spencer, deputy to the vice president, Corporate Marketing. "With reorganization, the various new divisions produced their own marketing literature."

Unfortunately, the result was inconsistency among the divisions. The action team discovered that some of the divisions have little or no literature and some of the existing material is also outdated..

"Data Systems and Allied, on the other hand, have existed for some time and have a considerable amount of literature," says Spencer.

"Grumman would like to be perceived as one company with a variety of products and abilities," says Spencer. "Our marketing literature should reflect this philosophy."

"The group's goal is to establish an agreed — upon procedure to be followed by the divisions to ensure the development of adequate, quality literature," says Spencer.

Team Members

Data Systems

Hans Broner, director, Industrial Systems; Thomas Colasuonno, acting assistant director, Network Management; George Drivas, director, Planning and Resources; Joseph Marchese, director, Holtsville Production Center; Kevin McEvoy, director, Accounting; Patrick Molluso, vice president, Infoconversion; Frank Ortolani, director, Information Processing; Robert Service, assistant to vice president, Information Services; Peter Shaughnessy, senior technical analyst; Lester Fox, director, Intercorporate Services; Joseph Vecchio, director of Contracts.

Personnel And Administration

Frank Campbell, director, Personnel Relations and Services; Michael DeSanto, director, Administrative Support; Theodore Faller, director, Flight Transportation; Dick Kosse, deputy director, Administrative Services; Art Leach, director, Administrative Services; Dick McGuire, assistant to director, Security; Walter Smith, chief pilot, Flight Transportation.

Corporate Development

Ron Spencer, deputy to vice president, Corporate Marketing; Dave Walsh, vice president, Corporate Marketing; Fred Edwards, director, Mergers and Acquisitions; Nick Obreiter, chief administrator, Corporate Development; Tom Molloy, assistant to director, Business Operations; Ric Trotta, director, Development Resources; Dick Henkel, staff assistant to vice chairman, Corporate Development; Joe Kucera, communications manager, Field Operations; Bern Kovit, director, Marketing Communications.

News Briefs

Tomcat Flies On Cable TV

In late February, on cable television's Discovery Channel, F-14 fans can catch an hour-long show featuring the Grumman Tomcat. The show is just one of the 13 episodes of Great Planes, which chronicles the history and development of U.S. warplanes.

The F-14 show will air on Wednesday, February 22, 9 to 10 p.m.; Friday, February 24, 4 to 5 p.m.; and Saturday, February 25, 1 to 2 p.m. All times are eastern.

Check your cable television guide for other shows in the Great Planes series.

School Funding Available

Grummanites interested in pursuing a career in manufacturing can apply for a scholarship to obtain a bachelor's degree in manufacturing engineering/technology.

To be eligible for the scholarship, you must have either: a two-year associate's degree in mechanical or manufacturing engineering; or sufficient credits to enter the junior year of an accredited manufacturing engineering/technology curriculum.

Scholars receive an annual award to defray the cost of tuition, fees, and expenses. Summer employment at Grumman between school terms is mandatory.

Seven scholarship winners are now completing their studies at State University of New York - Farmingdale and Arizona State University. Along with your application, you must submit two letters of recommendation from your school's faculty, plus your latest school transcript. The deadline is March 15.

For more information, contact Bob Freyer, (516) 575-2778.

New Appointments

The following Grummanites recently received new assignments in the Aircraft Systems Division:

Configuration /Data Management: Steven W. Damiani, assistant manager, Computer Operations; Edward Waters, manager, Special Projects/New Business Proposals.

Technical Operations: Charles B. McLaughlin, project engineer, Preliminary Design; Douglas Ho, group head, Software Verification and Validation.

Readership Survey

We don't want to do all the talking. We'd like to know what you think about the things you see in these pages. Your comments, suggestions and complaints are welcomed. Please take a few minutes and give us your opinions.

Article	Great	Good	Poor	Didn't Read
EA-6B (P. 1)	[ ]	[ ]	[ ]	[ ]
Quarterly Report (P. 2)	[ ]	[ ]	[ ]	[ ]
Pin Meeting (P. 3)	[ ]	[ ]	[ ]	[ ]
Space Station (P. 5)	[ ]	[ ]	[ ]	[ ]

Suggestions for Future Articles:.....

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Comments About This Issue:.....

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Name.....

Ext.....(Required If You Wish A Reply)

Division .....

[ ] I am a Grumman retiree.

Mail to: Grumman World, A22-GHQ
1111 Stewart Ave., Bethpage, N.Y.11714

Retiree Obituaries

Joseph J. Abramoski of 92 Meade Ave., Bethpage, N.Y., Nov. 22, 1988. He retired in 1972.

Thomas S. Barnes of 229 Carmel Dr., Ft. Walton Beach, Florida, died Nov. 7, 1988. He retired in 1978.

John W. Bonanza of 220 SE 9th Ave., Hallandale, Florida, died Jan. 10, 1989. He retired in 1978.

George E. Brown of 407 Fourth St., East Northport, N.Y., died Nov. 3, 1988. He retired in 1976.

Albert F. Burri of 127 West Gate Dr., Port Orange, Florida, died Jan. 11, 1989. He retired in 1973.

Lee I. Caldwell of 376 Grace St., Holbrook, N. Y., died Jan. 15,1989. He retired in 1984.

August Celler of 34 Armell Street, Huntington Station, N.Y., died October 24, 1988. He retired in 1972.

Willard A. Cornwall of 691 Hawkins Rd., East Coram, N.Y., died Nov. 11, 1988. He retired in 1973.

Michael A. Cortigino of 1004 S. Thompson Dr., Bay Shore, N.Y., died Nov. 20, 1988. He retired in 1979.

Thomas W. Costello of 3015A Aaron Burr Ave., Winter Park, Florida, died Oct. 31, 1988. He retired in 1977.

Anna F. Cozza of 33 Davis Rd., Port Washington, N.Y., died Jan. 8, 1989. She retired in 1977.

Frank J. Curley of 216 No. 2nd St., Bethpage, N.Y., died Dec. 1, 1988. He retired in 1982.

Harry J. DeMeo of 21 Park Ave., Port Washington, N.Y., died Jan. 16, 1989. He retired in 1987.

Kenneth E. Erland of 520 E. Chester St., Long Beach, N.Y., died Dec. 2, 1988. He retired in 1977.

Frank W. Fairbrother of 1707 Michigan Ave., Kissimmee, Florida, died Nov. 21, 1988. He retired in 1973.

William Fehrs Jr. of 3 Shakerhollow Rd., Setauket, N.Y., died Oct. 28, 1988. He retired in 1987.

Anthony J. Fusaro of 4 South La., Huntington, N.Y., died Jan. 3, 1989. He retired in 1982.

John H. Geyer at Box 44, Florence, Texas, died Dec. 6, 1988. He retired in 1984.

Joseph F. Geyer of 14 Vernon St., Patchogue, N.Y., died Nov. 22, 1988. He retired in 1975.

George Gifford at NAS Cubi Point, P.O. Box 53, FPO San Franciso, California, died Nov. 20, 1988. He retired in 1983.

Edwin J. Halpin of 50 Midland Blvd., Lake Ronkonkoma, N.Y., died Dec. 19, 1988. He retired in 1975.

John Hemendinger of 1161 Cornish St. NE, Aiken, South Carolina, died Jan. 2, 1989. He retired in 1973.

Leroy Holton at P.O. Box 74, Shirley, N.Y., died Dec. 3, 1988. He retired in 1979.

George R. Hulse of 2165 SW University St., Stuart, Florida, died Dec. 28, 1988. He retired in 1988.

Margaret C. Imrie of 16706 Cypress Way, Los Gatos, California, died Dec. 2, 1988. She retired in 1972.

Byron L. Kelly of 5620 SE Meyers Ave., Milwaukie, Oregon, died Dec. 1, 1988. He retired in 1977.

Theodore W. Kroncke of 62 Farragut Dr., Palm Coast, Florida, died Dec. 8, 1988. He retired in 1975.

John Lapinski of 16 Sheppard St., Glen Head, N.Y., died Nov. 20, 1988. He retired in 1984.

Alfio Lazzaro at Box 254, Ridge, N.Y., died Dec. 7, 1988. He retired in 1984.

Harold Leo at RD #1, Box 40, Troy, N.Y., died Dec. 21, 1988. He retired in 1965.

Victor G. Marks of 4550 N. Flow Wells, Tucson, Arizona, died Jan. 18, 1989. He retired in 1974.

Daniel E. Masler of 521 N. Riverside Dr., Pompano Beach, Florida, died Nov. 16, 1988. He retired in 1977.

John M. McNamara of 3553 Kenora Pl., Seaford, N.Y., died Dec. 25, 1988. He retired in 1986.

Alfred A. Morlock of 216 Richfield Ave., Syracuse, N.Y., died Nov. 27, 1988. He retired in 1977.

John T. Mullen Sr. of 4396 Indianapolis St. NE, St. Petersburg, Florida, died Nov. 27, 1988. He retired in 1978.

John J. Mulroy of 2819 Holly Oaks Dr., Marietta, Georgia, died Nov. 26, 1988. He retired in 1975.

Donald G. Myers of 311 Scudder Ave., Northport, N.Y., died Jan. 5, 1989. He retired in 1988.

John Nevins of 162 Sprucewood Dr., Levittown, N.Y., died Jan. 2, 1989. He retired in 1977.

Leslie Newlands of 188 Bellevue Ave., Upper Montclair, New Jersey, died Jan 8, 1989. He retired in 1970.

Walter Noelle of 2526 Johnston Rd., Columbus, Ohio, died Nov. 27, 1988. He retired in 1980.

Lawrence O'Shaughnessay at RD #1, Box 681, Beach Lake, Pennsylvania, died Nov. 25, 1988. He retired in 1977.

James Palmer of 170 State St., Westbury, N.Y., died Nov. 24, 1988. He retired in 1977.

Connie Parchini of 213 Thrush Dr., New Pt. Richey, Florida, died Jan. 9, 1989. She retired in 1977.

Robert L. Peckham of Main St., Box 366, Wainscott, N.Y., died June 9, 1988. He retired in 1971.

Claire Pereira of 508 Maple Ave., Uniondale, N.Y., died Jan 2, 1989. She retired in 1984.

John Peters of 7444 E. Balsam Cir., Mesa, Arizona, died Nov. 9, 1988. He retired in 1978.

Anthony Podejko at Rt. #4, Box 866, Starke, Florida, died Dec. 19, 1988. He retired in 1983.

Daniel W. Prince of 710 NE 31 St., Pompano Beach, Florida, died Dec. 13, 1988. He retired in 1969.

Louis Reich of 13 Daywood Ct., East Northport, N.Y., died Dec. 1, 1988. He retired in 1976.

James C. Riffle of 9255 Magnolia Ave., Space #135, Santee, California, died Dec. 24, 1988. He retired in 1985.

Leo J. Rogers at RR #1, Box 415, Sag Harbor, N.Y., died Dec. 5, 1988. He retired in 1987.

Thomas Russell of 64 Mediterranean Blvd., Port St. Lucie, Florida, died Dec. 15, 1988. He retired in 1982.

Francis X. Ruzicka of 15 Cottonwood Dr., Commack, N.Y., died Jan. 6, 1989. He retired in 1987.

Rita T. Schiavetta of 135 Harrison Ave., Bethpage, N.Y., died Nov. 21, 1988. She retired in 1977.

Albert J. Sharp of 485 Stratford La., Ridge, N.Y., died Dec. 24, 1988. He retired in 1976.

Robert A. Snyder of 1817 Buttonbush Cir., Palm City, Florida, died Dec. 9, 1988. He retired in 1982.

Leon Sorocki of 3530-16 Long Beach Rd., Oceanside, N.Y., died Dec. 11, 1988. He retired in 1988.

Norbert C. Strohsnitter of 104 Glen Dr., Ridge, N.Y. , died Nov. 8, 1988. He retired in 1987.

Joseph Stryjewski of 149 Manor Parkway, Uniondale, N.Y., died Jan. 20, 1989. He retired in 1973.

Alfred H. Suhr of 240 E. 76th St., Apt. 3M, New York, N.Y., died Dec. 10, 1988. He retired in 1976.

Ralph W. Thompson of 615 Marlene La., Mattituck, N.Y., died Jan. 13, 1989. He retired in 1976.

Edna H. Trzcinski of 125 Westminster Dr., Tavernier, Florida, died Dec. 26, 1988. She retired in 1965.

William VanDerVlies of 215 Down East La., Lake Worth, Florida, died Jan. 3, 1989. He retired in 1972.

George W. Voss of 8443 Redfield Dr., Port Richey, Florida, died Dec. 13, 1988. He retired in 1983.

Bernard H. Waag of 43 Satellite La., Levittown, N.Y., died Nov. 7, 1988. He retired in 1987.

Eloise G. Ward at P.O. Box 241, Long Beach., Mississippi, died Jan.1, 1989. She retired in 1971.

Reginald Williamson of 71 Great Neck Rd., Amityville, N.Y., died Dec. 30, 1988. He retired in 1967.

Joseph P. Lyons of 6324 Aberdeen Ave., New Pt. Richey, Florida, died Oct. 31, 1988. He retired in 1976.

James L. Maxwell of West Hill, Marathon, died Oct. 19, 1988. He retired in 1976.

John Mayall of 16415 Buccaneer Ave., Houston, Texas, died Oct. 27, 1988. He retired in 1977.

John E. Messa of 485 Sundoro Ct., Merritt Island, Florida, died Oct. 31, 1988. He retired in 1978.

Harold C. Noonan of 16 Glenview Pl., Halesite, N.Y., died Oct. 20, 1988. He retired in 1977.